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Report of the
Defense Science Board Task Force
on
JOURNAL OF DEFENSE RESEARCH (JDR)



June 1985

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Office of the
Under Secretary of Defense
for Research and Engineering

Washington, D.C. 20301

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SECURITY CLASSIFICATION OF THIS PAGE

REPORT DOCUMENTATION PAGE				Form Approved OMB No 0704-0188 Exp Date Jun 30, 1986		
1a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED			1b. RESTRICTIVE MARKINGS NONE			
2a. SECURITY CLASSIFICATION AUTHORITY N/A			3. DISTRIBUTION / AVAILABILITY OF REPORT Distribution Statement A. Approved for Public Release: Distribution unlimited.			
2b. DECLASSIFICATION / DOWNGRADING SCHEDULE N/A						
4. PERFORMING ORGANIZATION REPORT NUMBER(S) N/A			5. MONITORING ORGANIZATION REPORT NUMBER(S) N/A			
6a. NAME OF PERFORMING ORGANIZATION Defense Science Board, Ofc of the Under Secy of Def (A)		6b. OFFICE SYMBOL (If applicable) DSB/OUUSD (A)	7a. NAME OF MONITORING ORGANIZATION N/A			
6c. ADDRESS (City, State, and ZIP Code) The Pentagon, Room 3D1020 Washington, D.C. 20301-3140			7b. ADDRESS (City, State, and ZIP Code) N/A			
8a. NAME OF FUNDING / SPONSORING ORGANIZATION Defense Science Board/OUUSD (A)		8b. OFFICE SYMBOL (If applicable) DSB/OUUSD (A)	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER N/A			
8c. ADDRESS (City, State, and ZIP Code) The Pentagon, Room 3D1020 Washington, D.C. 20301-3140			10. SOURCE OF FUNDING NUMBERS			
			PROGRAM ELEMENT NO.	PROJECT NO.	TASK NO.	WORK UNIT ACCESSION NO.
			N/A	N/A	N/A	N/A
11. TITLE (Include Security Classification) Report of the Defense Science Board Task Force on Journal of Defense Research (JDR), UNCLASSIFIED						
12. PERSONAL AUTHOR(S) N/A						
13a. TYPE OF REPORT Final		13b. TIME COVERED FROM N/A TO N/A		14. DATE OF REPORT (Year, Month, Day) 85/06/00		15. PAGE COUNT 25
16. SUPPLEMENTARY NOTATION N/A						
17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)			
FIELD	GROUP	SUB-GROUP				
19. ABSTRACT (Continue on reverse if necessary and identify by block number)						
20. DISTRIBUTION / AVAILABILITY OF ABSTRACT <input checked="" type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT. <input type="checkbox"/> DTIC USERS						
21. ABSTRACT SECURITY CLASSIFICATION						
22a. NAME OF RESPONSIBLE INDIVIDUAL Diane L.H. Evans			22b. TELEPHONE (Include Area Code) (202) 695-4158/6463		22c. OFFICE SYMBOL DSB/OUUSD (A)	

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27 August 1985

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Department of Defense

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DTIC TAB	<input type="checkbox"/>
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REPORT
OF THE
DEFENSE SCIENCE BOARD TASK FORCE
ON
JOURNAL OF DEFENSE RESEARCH (JDR)

JUNE 1985

OFFICE OF THE UNDER SECRETARY OF DEFENSE FOR RESEARCH & ENGINEERING
WASHINGTON, D.C. 20301



DEFENSE SCIENCE
BOARD

OFFICE OF THE SECRETARY OF DEFENSE
WASHINGTON, D.C. 20301

TO: Members of the Defense Science Board Task Force On
Journal of Defense Research (JDR)

FROM: Harold Rosenbaum, Chairman

DATE: 11 June 1985

CC: File

Enclosed for your review and comments is a draft of our final report. I am enclosing for your information the letters from Secretary Taft and Dr. Wade implementing our recommendations.

Again, thanks for your help.



Harold Rosenbaum, Chairman



THE UNDER SECRETARY OF DEFENSE

WASHINGTON, DC 20301-3010

6 JUN 1985

RESEARCH AND
ENGINEERING

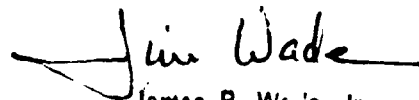
MEMORANDUM FOR ASSISTANT SECRETARY OF ARMY (RD&A)
ASSISTANT SECRETARY OF NAVY (RE&S)
ASSISTANT SECRETARY OF AIR FORCE (RD&L)

SUBJECT: Journal of Defense Research

The Journal of Defense Research (JDR), since 1969, has published defense related classified research, development and experimentation. The intent is to selectively make available the peer refereed results of classified research and to serve as an archival Journal of this information to be used by future researchers. The Defense Science Board recently completed a review of the JDR at the request of Mr. Taft, Deputy Secretary of Defense. Mr. Taft concluded that the JDR is a mission essential journal for defense related research and development and directed publication be continued, encouraged, and improved (copy attached).

The new DARPA Executive Board for JDR will be the major steering group for the Journal. The Services can help guide the content and security of the JDR, providing valuable inputs from Service research and development efforts. As such, I request you assign a senior person from your Service to serve as a member of the DARPA JDR Executive Board. Your member of this Board should be knowledgeable of his Service's classified research and development efforts and their needs.

You are requested to designate a representative to the Director, DARPA.


James P. Wade, Jr.
Acting

Attachment a/s

cc: DARPA



THE DEPUTY SECRETARY OF DEFENSE

WASHINGTON, D.C. 20301

24 MAY 1985

MEMORANDUM FOR DIRECTOR, DEFENSE ADVANCED RESEARCH PROJECTS AGENCY
CHAIRMAN, OSD PERIODICALS & PAMPHLETS REVIEW BOARD

SUBJECT: Journal of Defense Research (JDR)

The FY 1984 OSD Periodicals Review Board recommended discontinuing publication of the JDR. I tentatively agreed to this recommendation but, on appeal from DARPA, requested the Defense Science Board review the JDR for potential security risks, cost effectiveness and duplication with other sources of scientific information.

Based on the DSB findings and advice I have decided to continue publication of the JDR on the basis it is mission essential. As such, the OSD Periodicals Review Board is requested to limit future reviews to areas of achieving effective cost control. I also request that DARPA constitute an Executive Board to increase the timeliness, security, and cost effectiveness of the JDR. The Board should include Service and security representatives.

I would like a status report on the impact of these changes by October 1985.

William H. Taft, IV

cc: USDRE

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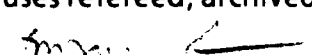
EXECUTIVE SUMMARY

The task force concludes that pursuant to some changes the Journal of Defense Research (JDR) should be continued.

The JDR is "mission essential" as a classified research tool: is not duplicated by available source such as DTIC; and does not present an unacceptable security risk.

With respect to security issues and concerns about duplication with the DTIC data bases, our findings are based upon recommendations made to the task force by the Deputy Administrator, DTIC; and the Principal Director, Counter-Intelligence and Security Policy.

As scientists and engineers engaged in research for the Department of Defense, the task force recognizes the mission essential nature; that is, the utility and uniqueness of an archived, refereed journal. Being the only classified journal of its type, the JDR is used to communicate ideas amongst the defense community and is a basic tool for researchers. Almost every professional discipline, including law, medicine, the physical sciences, etc., uses refereed, archived journals such as the JDR as a fundamental research tool.



The OSD Periodicals Review Board, in its 1984 review process, considered additional information relative to the JDR only in the area of security. Based upon information supplied in writing from the Director, Security Plans & Programs, they concluded that the JDR "poses a significant security risk." Subsequent to this, the same Director, Security Plans & Programs, clarified his intent, again in writing, by stating that the particular security matters involved do not constitute justification for elimination of the JDR. The Deputy Administrator of DTIC supplied to our task force, in writing, documentation of all statements made before the task force. He said: "I do not see duplication between the holdings in the DTIC data base and journals. Technical reports contain the detailed research results whereas journals contain the overview of the status of the particular technology and, in fact, are often adopted from multiple technical reports."

The OSD Periodicals Review Board has identified legitimate cost and security concerns. As a result of past recommendations, the cost of producing the JDR has been reduced by half. This task force feels a continued effort of cost reduction is warranted.

Security is a continuing and important issue. While the task force agrees the major emphasis should be placed on the upfront review applied currently to all papers before they are cleared for publication, the task force agrees with the board concerning the unclassified abstract and recommends it be terminated.

Because the task force believes a vital, classified journal such as the JDR is essential to national security research, we recommend that steps be taken to increase the quality of its contents and the timeliness and scope of its distribution. We recommend that an executive board under the direction of DARPA be constituted and that board include representatives from the Service Secretariats and the security areas. The function of the board will be to increase the timeliness and scope of the articles in the JDR and to provide continuing scrutiny over the security issues.

The task force further recommends that the OSD Periodicals Review Board accept the mission essential nature of the JDR and work with the DARPA Executive Board to achieve cost reduction goals. The OSD Periodicals Review Board should no longer carry out an annual review of the JDR.

I. INTRODUCTION

The results of the task force review may be conveniently separated into two parts. First, the task force collected new information from DoD's security and information agencies which bears directly on issues cited by the OSD Periodicals Review Board with respect to the alleged significant security risk of the JDR and the allegation that it was duplicated by the Defense Technical Information Center (DTIC) data base.

The second part of the task force review involved a critical assessment by the technical community involved in classified research. The task force used the opinions of others as well as its own insight into the research process to assess the cost benefit of the JDR.

A complete Terms of Reference of the task force is contained in Appendix I. Briefly, the Deputy Secretary of Defense requested the technical judgment of the Defense Science Board concerning off-setting benefits of the Journal. He specifically asked the DSB to address: the scientific value and whether it is commensurate with costs; whether the Journal is unique in its relation to alternative sources; and whether security measures are adequate. By way of background, the OSD Periodicals Review Board in recommending that the JDR be discontinued cited their views that the Journal represented an unacceptable security risk; that it lacked in cost effectiveness; and that there was a duplicate availability through the DTIC data base.

The DSB constituted a panel to address these issues. The panel membership is shown in Appendix IV. Care was taken to assure that while the panel was constituted from scientists and engineers in the defense community, many of whom were familiar with the JDR, none of the panel members had a direct involvement in the JDR. The panel met once. An agenda of that meeting is shown in Appendix III. The panel heard from all interested parties, including the Editor of the JDR; the Director of DARPA, the Executive Agent of the JDR; the OSD Periodicals Review Board; the security area; and DTIC.

II. DISCUSSION

The JDR is a quarterly publication. Papers are usually solicited and special issues with guest Editors are common. The editorial process is voluntary in much the same way as it is with the unclassified technical journals from professional technical societies. The Managing Editor of the Journal is currently the Battelle Memorial Institute, under direct contract to the Defense Advanced Research Projects Agency (DARPA). All papers of the JDR are classified, either Confidential or Secret. There are no unclassified papers. The JDR is distributed through normal security channels with distribution approval by DARPA. The need-to-know criticism for the varied papers on the Journal is applied at the "front end" of the security classification process. That is, before publication in the Journal, the contracting officer's technical representative must clear the paper. He does so with the full knowledge that the Journal will have a wide distribution. In 1985, approximately 1200 copies of the Journal were distributed. Thirty-four percent of these copies went to the DoD; sixty percent to DoD contractors; three percent to non-DoD government; and three percent to non-DoD contractors (DOE laboratories).

In its 1984 review of the JDR, the OSD Periodicals Review Board unanimously concluded that the JDR posed a significant security risk. Their contention was that JDR recipients worked in a single discipline and therefore making a wide source of material available to them posed an unacceptable security risk. The board was also particularly critical of the unclassified abstracts which accompany the JDR.

This task force is in receipt of a letter from Mr. Maynard C. Anderson, Director, Security Plans & Programs, which states specifically that the decision to retain the Journal should not hinge upon the particular security issues involved. The publication of the Journal can still be consistent with DoD security policy. There are no known violations involving the JDR.

As far as need-to-know is concerned, it should be recognized that engineers and scientists generally fall into broad areas of expertise. That is, people who are working today on lasers are physicists and engineers whose skills happen to be currently applied to laser problems. There are other areas of physics and engineering and they do indeed have a need-to-know and a need-to-communicate.

The task force did agree, however, that little purpose was served by the unclassified abstract which accompanies the JDR. Further, since that abstract could be removed from the Journal, it was felt the security risk involved was not worth any benefit gained by distribution of the abstract.

In assessing the general area of security risk, there is no question that, just like any other classified document, the JDR does pose a security risk. The risk is not an unacceptable one and the benefits certainly justify the extra precautions required. Security for the JDR is handled at the "front end." That is, the articles which appear in the Journal have been reviewed and approved with full knowledge of the audience they will reach. It is the same system that is used for all classified technical meetings and to date there are no known violations.

The FY84 OSD Periodicals Review Board also concluded that the Defense Technical Information Center provides the DoD scientific community a major research repository, and that JDR provides random articles and therefore the JDR is duplicative and not essential. This judgment by the OSD Periodicals Review Board is completely unwarranted. There is a fundamental difference between a wide data base and an archived, refereed journal such as the JDR. Journals are essential research tools, they are not duplicated by or duplicative of a general data base. The JDR as a refereed archived journal has been in publication since 1969 and is stored in many reference libraries. Amongst its articles, sixty percent are solicited and forty percent unsolicited. In the review process that accompanies each article, thirty-two percent of the papers are rejected, twenty percent are accepted as is, and forty-eight percent are accepted with modifications. Journals in any discipline are essential for research and are not duplicated by a general data base. The Deputy Administrator for the DTIC spent some time with the task force and has submitted to us, in writing, his explanation of the utility of a journal as opposed to a wide data base. A copy of that letter is supplied in Appendix II.

This task force concludes therefore that security issues and DTIC duplication should no longer be cited as rationale for terminating the JDR. Concerns expressed by the OSD Periodicals Review Board about excessive security risk and duplication with DTIC have been addressed by the new information provided by DoD as

included in Appendix II. As to the mission essential nature of the JDR, this task force, using evidence from other researchers and its own technical expertise, concludes that the classified JDR is mission essential for extracting the maximum benefits from the \$40 billion per year invested in this country's R&D. This Journal provides the only classified, refereed communication channel for DoD researchers. It provides the most effective way for avoiding the duplication of work that has been done in the past and its summary articles save incalculable time and effort in new research areas. Special issues published by the JDR are particularly useful in responding to new thrusts such as the current Strategic Defense Initiative.

With respect to cost, the OSD Periodicals Review Board has stimulated a fifty percent reduction in the cost of the Journal. These costs are still high compared to unclassified journals, but may be the result of special handling due to the classified nature of the Journal and excessively high government printing office costs. The task force concurs with the OSD Periodicals Review Board that continued efforts should be made to reduce the costs of this Journal.

III. CONCLUSIONS AND RECOMMENDATIONS

The task force concludes that the 1984 OSD Periodicals Review Board did not examine the mission effectiveness of the JDR; that the JDR does not represent an excessive security risk; that the JDR is not duplicative of any other source, including DTIC; and that the JDR is costly compared to other journals but cost effective. Therefore, the task force recommends the continued publication of the JDR. The task force recommends that publication of the unclassified abstract cease and that efforts continue to reduce costs of publishing the Journal.

The task force is convinced of the mission effectiveness of this Journal and recommends efforts be initiated to increase the technical vitality of the JDR. The task force recommends that the Defense Advanced Research Projects Agency constitute an executive board with membership from the Service Secretariats and from the relevant security offices. This executive board should ensure the timeliness and effectiveness of the JDR articles and continued scrutiny over security issues.

Further, the task force recommends the OSD Periodicals Review Board accept the mission essentiality of the JDR and work with the DARPA executive board to achieve cost reduction goals. Therefore, the OSD Periodicals Review Board should no longer subject the JDR to a review process.



APPENDIX I
THE DEPUTY SECRETARY OF DEFENSE

WASHINGTON, D.C. 20301

1 MAR 1985

MEMORANDUM FOR THE CHAIRMAN, DEFENSE SCIENCE BOARD

SUBJECT: Journal of Defense Research (JDR)

The OSD Periodicals Review Board has recommended discontinuing publication of the JDR. I have tentatively agreed to this recommendation but an appeal from the Director of DARPA is currently pending for my consideration. In supporting its recommendation the Review Board cites potential security risks, lack of cost effectiveness and duplicate availability of scientific information contained in the Journal through the Defense Technical Information Center (DTIC).

I need the technical judgment of the DSB concerning the offsetting benefits of the Journal before ruling on the pending appeal. I request that you convene a small panel of qualified scientists and engineers to address three key issues. First, is the scientific value of the JDR commensurate with its yearly cost? Second, is it unique in relation to alternative sources of classified technical information? Finally, are the security measures used to protect the Journal adequate and the risks of disclosure of sensitive information through its wide distribution properly balanced by its value to Defense research?

I would like a report on the Board's view of these issues by June 1, 1985.

A handwritten signature in dark ink, appearing to read "WHT 3".

William H. Taft, IV

03202



POLICY

APPENDIX II
OFFICE OF THE UNDER SECRETARY OF DEFENSE
WASHINGTON D C 20301-2000

4 APR 1985

MEMORANDUM FOR THE CHAIRMAN, OSD PERIODICALS REVIEW BOARD

SUBJECT: Journal of Defense Research

Reference is made to my memorandum to you of 17 October 1984 on this subject, in which I expressed concern that the manner in which the Journal was disseminated "constitute(s) a violation of the spirit of the "need-to-know" principle -- if not a violation of the regulatory requirement".

Since writing that memorandum, I have learned that it is being cited as principal justification for elimination of the Journal altogether. I wanted to clarify to you that this was not the intent of my memorandum. While we continue to feel that greater efforts should be made to structure the Journal to focus upon related classified topics and subsequently limit its dissemination to cleared persons working in related fields, the fact that this may not have been done in the past or cannot feasibly be done in the future should not be determinative of the Journal's survival. Pertinent DoD security regulations require adherence to the "need-to-know" principle "consistent with operational requirements and needs". Obviously, we would like to minimize exposure of classified information, even to cleared personnel or contractors, if they have no need for it. If, however, this is not feasible, and dissemination and handling of the classified material is otherwise accomplished in accordance with other applicable security requirements (which we assume is the case here), the publication of the Journal can still be consistent with DoD security policy.

In short, the decision to retain the Journal should not, in our view, hinge upon the degree to which it is consistent with "need-to-know" requirement, although, if a decision is made to retain it, we would encourage greater attention to this policy by its editors and publishers.



Maynard C. Anderson
Director
Security Plans and Programs

APPENDIX II

DEFENSE LOGISTICS AGENCY
DEFENSE TECHNICAL INFORMATION CENTER
CAMERON STATION
ALEXANDRIA, VIRGINIA 22314



IN REPLY
REFER TO

DTIC-AD

9 May 85

SUBJECT: Defense Science Board Task Force on Journal of
Defense Research

TO: Dr. Harold Rosenbaum
Defense Science Board

1. The purpose of this memo is to document oral statements made before the above Task Force on 12 Apr 85.
2. The Defense Technical Information Center (DTIC) mission of providing scientific and technical information does not duplicate the function served by journals. The DTIC provides access to planned, on-going, and completed research and development and, in fact, the technical report data base (completed research and development) includes journals. The data bases maintained by DTIC for DoD may contain the same data or information found in a journal article but the journal article could not have been written without review and analyses of many individual pieces of available information.
3. Journals contain synthesized information in selected subject areas, or saying it another way, information that is repackaged according to expressed or anticipated needs, and is basically used by individuals to maintain awareness of the state-of-the-art in a particular subject area. Journals are summary in nature. Technical reports contain research and development results that are of potential utility to researchers in their everyday work.
4. I do not see duplication between the holdings in the DTIC data bases and journals. Technical reports contain the detailed research results, whereas journals contain the overview of the status of a particular technology and in fact are often adopted from multiple technical reports.


PAUL A. ROBEY, JR.
Deputy Administrator

APPENDIX III

AGENDA

Defense Science Board
Task Force on Journal of Defense Research

12 April 1985
Room 1E801, #3 Pentagon

0900	Room open for looking at past copies of the <u>JDR</u>	
0930	Administrative Remarks/Executive Session	
1000	<u>JDR</u> Overview	- Mr. Alex. Tachmindji, JDR Editor
1030	DARPA Roundtable	- Dr. R.S. Cooper, Director, DARPA
1100	Security Issues	- Mr. L. Britt Snider, Principle Director Counterintelligence and Security Policy, ODUSDP
1200	Lunch	
1300	OSD Periodicals and Pamphlets Review Board	- Col. Stan Jensen, Assistant Director for Print Media Plans and Policy, American Forces Information Service, OSAD(PA)
1400	DTIC Capabilities	- Mr. Wm. Thompson, DTIC
1430	Executive Session	

Approved: _____

M. C. Current
Commander, USN
Military Assistant
Defense Science Board

APPENDIX IV

MEMBERSHIP

Defense Science Board Task Force on Journal of Defense Research (JDR)

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Dr. Harold Rosenbaum
Rosenbaum Associates, Inc.

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Vice President & Senior
Fellow
Resources for the Future

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